Haskell Lake Area Petroleum Contamination Site (Tower Standard LUST)

Meeting Date: June 09, 2017
Location: teleconference

Meeting Participants:

WDNR	Chris Saari
Lac du Flambeau	Dee Allen, Kristen Hanson
EPA R5 LCD	Bob Egan
EPA R5 TIAO	Anthony Greenwater
REI Engineering	Dave Larsen

Objective: Develop consensus on additional sampling locations.

1. The group discussed the need to clarify the agenda and purpose of future meetings, so that appropriate staff or managers can be notified and present. Technical staff should attend the recurring technical meetings, while managers and leadership should be informed well in advance of occasional managerial meetings.

2. The USGS is expected to return to the area again this summer to perform slug tests, gage streams, and explore surface water-groundwater interaction. The group agreed that proposed onsite slug tests would be valuable. Notice prior to the visit may be short, since fieldwork is likely to be rain-driven. EPA does not consider its access agreement with the owners as applicable to USGS work, so access issues should be worked out well in advance. LDF expects to deploy tribal law enforcement to observe this event, a presence that REI wants to talk over with the property owners. LDF and REI plan to jointly talk to the owners about access and observers.

3. The group discussed various drilling and sampling methods. Discussion of hollow stem, mud rotary, sonic, cable tool and geoProbe described some problems with methodologies as applied to site conditions. No preferred installation method was identified, but the possibility of mobilizing more than one rig was viewed as feasible and potentially useful in addressing different conditions vertically and across the site. WDNR thought multiple rigs could be time-efficient without being cost-prohibitive. More research will be done on the utility of Solinst multi-port samplers, or equivalent. The decision-making process for selection of drilling and sampling technologies was not described.

4. The group considered possible explanations for the smear zone eastward and downward. Conjectures included:
    - pond leakance drawing water downward
    - seasonal infiltration of surface water, reflected in downward gradients at several wells
    - altered conditions stemming from earlier remedial efforts

5. All recognized that monitoring well locations recommended by LDF and EPA are not exact and may require adjustment, due to terrain, overhead obstacles, drill rig access problems, and compromises in network design.

6. WDNR provided written and verbal comments on additional monitoring wells proposed by LDF and EPA. These comments relied on historical knowledge of what has typically been funded under PECFA. Generally, WDNR considers data from some of the recommended locations as unnecessary and beyond what PECFA normally requires or would pay for. EPA and LDF argued that data from some existing wells is out of date and the new wells will help define plume margins. LDF further stated that the proposed locations are not duplicative at depth, will be useful post-remediation, and will be useful in determining transport toward lake. EPA remains a potential source of funding for recommended wells declined by WDNR/PECFA.

7. Preliminary results from discussion of EPA/LDF recommendations (hand-drawn map attached):

#1 Cluster of 3 wells on the shore of Haskell Lake, between VAS-11 and VAS-01.
Purpose: better define influx to lake and confirm/monitor western plume margin.

- WDNR sees location as partly duplicative of existing wells. More discussion needed.

#2 Cluster of 3 wells on the shore of Haskell Lake, between VAS-02 and VAS-03.
Purpose: better define influx to lake.

- WDNR agrees with location, but only for intermediate and deep sampling, not at water table.

#3 Cluster of 2 wells between MW-18 and MW-19.
Purpose: Fill data gap between two groundwater hotspots.

- WDNR does not see value, as MW-18 and MW-19 are only about 75' apart.

#4 Cluster of 3 wells near VAS-02.
Purpose: Fill data gap between two plumes and monitor transport beneath lake.

- WDNR agrees with location, but only for intermediate and deep sampling, not at water table.

#5 Cluster of 3 wells near BH-7.
Purpose: Evaluate NAPL transport and develop long-term monitoring well.

- WDNR does not see value, as location is near MW-2 and installation would attempt plume delineation outside the scope of PECFA funding.

#6 Cluster of 2 wells near MW-22.
Purpose: Define western plume margin and gather data in vicinity of pump island.

- WDNR agrees with full-nest concept, but prefers to move somewhat westward.

#7 Cluster of 3 wells near BH-6.
Purpose: Long-term monitoring downgradient of the source.

- WDNR sees some value in this location, but sees more value in plugging alternative hole in the network, downgradient of MIP-3 and MIP-13. More discussion needed.

Action items and agreements:

1. WDNR will arrange next technical meeting, possibly on 4th Thursday, to again address wells and interim action.
2. All parties will clarify the agenda and purpose of future meetings and ensure best representation.
3. EPA will consult its ORD support regarding well locations, drilling methods.
4. REI will research Solinst (or similar) sampling technologies and report out on applicability to site.
5. LDF will provide USGS slug test methodology and results to group.
6. As needed, LDF and EPA will discuss EPA funding support for well installations.
7. LDF and REI will talk to the property owners about USGS access and LEO observers.